REMARKS

Claims 1-38 are pending in the application.

Claims 1-38 have been rejected.

Claims 1, 15-17, and 23-25 have been amended.

Amendments to the Claims

Applicant has represented the amendments to claims 1, 15-17, and 23-25 that were originally submitted in the response mailed July 12, 2005. Applicant respectfully request that these amendments, as represented in the listing of claims herein, be entered.

Applicant notes that these amendments were explicitly required by the Examiner on page 2 of the Final Office Action mailed May 12, 2005 in order to rewrite the language "inbound packet" and "outbound packets" without parenthesis and quotation marks. In response to this requirement, claims 1, 15-17, and 23-25 have been amended. These amendments do not narrow the scope of the claims and do not present new matter.

Rejection of Claims under 35 U.S.C. § 103(a)

Claims 1-38 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Shinohara, U.S. Patent No. 6,067,298 (hereinafter "Shinohara"), in view of Yin et al., U.S. Patent No. 5,768,257 (hereinafter "Yin"). Applicants respectfully traverse this rejection.

As noted in the response mailed November 30, 2004, the cited art fails to teach or suggest a system in which, "approximately when the output traffic manager drops outbound packets or is about to drop said outbound packets, the output traffic manager communicates to the ingress receiver to drop inbound packets destined for the selected queue," as recited in claim 1.

Shinohara teaches a system in which: "In each output line corresponding queue within the output buffer module section 30, when the queue length Qoxbl exceeds the threshold value Qth_bpoxbl, the output buffer module section 30 originates the back pressure signal (BP_OXBL) 70 to all input buffer module sections. The input buffer module section 20 ceases to transmit cells to the output line to which the BP_OXBL signal 70 has been originated." Shinohara, col. 8,

lines 12-17. Thus, Shinohara teaches a system in which one or more input buffer module sections cease to transmit cells to an output line if a back pressure signal has been originated.

Shinohara's communication to the input buffer module sections is used to cause the ingress buffer module sections to stop sending packets to the output line, not to cause the input buffer module sections to begin dropping packets. Shinohara neither teaches nor suggests a communication to drop packets. Thus, as noted by the Examiner in the Final Office Action mailed May 12, 2005 (hereinafter referred to as "FOA"), "Shinohara fails to teach the output traffic manager communicates to the ingress receiver to drop inbound packets destined for that queue." FOA, pp. 2-3.

Nevertheless, the Advisory Action mailed September 16, 2005 states: "Shinohara is not only taught the input buffer ceasing the transmit cells, but it also teaches to discard the packet when the buffers exceed the threshold." Advisory Action, PTOL-303. The Advisory Action cites col. 3, lines 37-44 of Shinohara, which describe the behavior of queues in the input buffer module section: "the buffer occupancy of an output line corresponding queue of the input buffer module section is observed for each logical channel, and discards a packet when a buffer occupancy of the logical channel of the packet in the output line corresponding queue exceeds a predetermined threshold value." This portion of Shinohara concerns the input buffer module section and is unrelated to the teachings about the output buffer module section which were cited in FOA. Thus, Shinohara teaches that (1) one or more input buffer module sections cease to transmit cells to an output line if a back pressure signal has been originated and (2) that the input buffer module sections drop packets in response to the occupancy of logical channels within queues in the input buffer module section. In other words, Shinohara's system drops packets destined for a particular queue based on the occupancy of a logical channel within that particular queue, not in response to a communication from another section. Accordingly, Shinohara clearly does not teach or suggest an output traffic manager that communicates to an ingress receiver to drop inbound packets.

Yin, both alone and in combination with Shinohara, also fails to teach or suggest a system in which, "approximately when the output traffic manager drops outbound packets or is about to drop said outbound packets, the output traffic manager communicates to the ingress receiver to drop inbound packets destined for the selected queue." Yin teaches a system in

which "packet discard decision block 430 decides when to drop a packet to be transmitted over the ATM network based on the ATM network feedback information carried in RM cells received from the ATM network and per VC buffer usage." Yin, col. 6, lines 15-20. Thus, in Yin's system, packet drop occurs in response to feedback received from the network, not in response to feedback received from an output traffic manager. Accordingly, Yin also fails to teach or suggest an output traffic manager that communicates to an ingress receiver to drop inbound packets destined for a selected queue. For at least these reasons, Yin, whether taken alone or in combination with Shinohara, clearly fails to teach or suggest claim 1.

The Advisory Action states: "It is inherently [sic] to understand that Yin's system also has the monitor or manager to detect a congestion or a fullness of queue (in the abstract), there Yin teaches the purpose of feedback is the same as claim invention." Advisory Action, PTOL-303. The Abstract of Yin states: "The network device receives TCP data packets and stores them in a queue. A TCP packet is discarded if the queue is full or network congestion is detected by the protocol operating in the ATM network." This simply states that Yin has a mechanism, similar to that described in Shinohara, for dropping packets that are stored (or about to be stored) in a particular queue, based on the occupancy of that particular queue. It clearly provides no teachings or suggestions to have an ingress receiver drop packets in response to a communication from an output traffic manager. Within both Yin and Shinohara, packets destined for a particular queue can be dropped based upon the occupancy of the queue, not in response to communications from an output traffic manager. Additionally, within Yin, packets can be dropped based upon "ATM network feedback information carried in RM cells received from the ATM network." Neither of these conditions for dropping a packet teach or suggest the features of claim 1.

Furthermore, as noted in the previous responses, Shinohara would not be expected to suggest the claimed invention, given that the reference does not suggest a need to drop packets in an ingress receiver in response to a communication from an output traffic manager. Instead, Shinohara focuses on flow control mechanisms that determine when one stage of a switch can release packets to another stage. For example, in "each output line corresponding queue within the output buffer module section 30, when the queue length Qoxbl exceeds the threshold value Qth_bpoxbl, the output buffer module section 30 originates the back pressure signal (BP_OXBL) 70 to all input buffer module sections. The input buffer module section 20 ceases to transmit

cells to the output line to which the BP_OXBL signal 70 has been originated." Shinohara, col. 8, lines 12-20. Thus, Shinohara teaches a flow control technique to control when packets are released by an input stage, not a technique to control when packets are dropped. It is noted that releasing packets from the input stage (i.e., allowing those packets to be transmitted from the input buffer module section 20) is not the same as dropping packets; releasing packets from the input stage controls when those packets will be sent to the output stage, while dropping packets causes packets to be discarded. Furthermore, as discussed above, Shinohara has described how and when packets are dropped in the input buffer module section, and these techniques clearly differ from the techniques recited in claim 1. Additionally, Shinohara does not describe any need to drop packets using the techniques described in claim 1.

Yin would also not be expected to teach or suggest the claimed invention, given that Yin is concerned with controlling when packets to be sent over an ATM network are dropped based on signals received from the ATM network. In contrast to Yin's teachings, which involve feedback cells received from the ATM network, claim 1 is concerned with a communication between an output traffic manager and an ingress receiver within an apparatus for switching packets from a network. In other words, Yin teachings concern communication between devices in a network, while claim 1 is concerned with a communication that is internal to a device that switches packets from a network. Accordingly, Yin would not be expected to suggest an "output traffic manager [that] communicates to the ingress receiver to drop inbound packets destined for the selected queue," as recited in claim 1.

Additionally, there is no suggestion to combine Shinohara and Yin. The Office Action states that "it would have been obvious... to implement the dropping method of Yin into Shinohara at the input buffer of Shinohara to reduce the traffic load and [sic] during the congested period." Final Office Action, page 3. However, there is no evidence that implementing the dropping method of Yin would result in a reduction of traffic load in the system of Shinohara, nor has any portion of either reference been cited in support of this proposition. "To support the conclusion that the claimed combination is directed to obvious subject matter, either the references must expressly or impliedly suggest the claimed combination or the examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the

references... [S]implicity and hindsight are not the proper criteria for resolving the issue of obviousness." *Ex Parte Clapp*, 227 U.S.P.Q. 972, 973 (Bd. Pat. App. & Int'f 1985).

Furthermore, the feedback mechanisms used in Shinohara and Yin are completely different, and there is no suggestion that a technique used in one system would work in the other. For example, in Yin, an ATM cell is conveyed via an ATM network to provide feedback from the ATM network to the network device. This is drastically different than the technique taught in Shinohara, which involves providing feedback between sections of an ATM switching system via a back pressure signal. It is not clear how feedback techniques involving transmitting cells via a network are relevant to feedback techniques involving conveying a back pressure signal within an ATM switching system, nor is it clear that such techniques could be combined.

Even if Shinohara and Yin could be combined, the resulting combination fails to teach or suggest the claimed invention. At best, the claimed combination would drop packets in response to a cell received from an ATM network (as taught in Yin) and would prevent packets from being released from an input section to an output section if the output section has asserted a back pressure signal (as taught in Shinohara). Thus, the combination still clearly fails to teach or suggest the claimed invention. Furthermore, it is unlikely that such a combination would arise, given that the use of one of these flow control techniques (e.g., such as that taught in Yin) is likely to render the use of another flow control technique (e.g., such as that taught in Shinohara) unnecessary.

In response to the above arguments, the FOA states that: "The function of Yin teaching is discarding the packet if a queue is full. Examiner implements the method of Yin into Shinohara's invention when Shinohara teaches the feedback control when the buffer is full. Therefore, the function of Yin can implement into Shinohara since both invention are same ATM network." FOA, page 5. These statements do not respond to Applicant's assertion that there is no suggestion to combine the references. Additionally, Applicant notes that these statements are inconsistent with the Examiner's previous assertions as well as the teachings of Yin. For example, in other sections of FOA, the Examiner cites Yin as teaching "dropping packets when receives a feedback information" (e.g., FOA, p. 3), not "discarding the packet if a queue is full." Applicant notes that the proposed combination is not formed by simply combining different sets of teachings regarding packet-handling behavior when a queue or buffer is full.

Furthermore, the statements presented on page 5 of FOA overlook several critical teachings of the cited references. The Examiner's position appears to be that, because Yin teaches dropping packets in response to receiving network feedback and Shinohara teaches an output section that asserts a backpressure signal, it would be obvious to drop packets in response to receiving a backpressure signal. However, this is clearly not true. Neither Shinohara nor Yin, either alone or in combination, teaches or suggests that it would be desirable to drop packets at an input receiver in response to a communication from an output traffic manager. Instead, Shinohara teaches that it is desirable to stop sending packets to an output section in response to a backpressure signal, and Yin teaches that it is desirable to drop packets based on feedback received from the network. To attempt to combine select teachings of the references, without regard to the context in which those teachings are presented, is inappropriate: "It is impermissible within the framework of section 103 to pick and choose from any one reference only so much of it as will support a given position to the exclusion of other parts necessary to the full appreciation of what such reference fairly suggests to one skilled in the art." *Bausch & Lomb, Inc. v. Barnes-Hind/Hydrocurve, Inc.*, 230 USPQ 416, 419 (Fed. Cir. 1986).

Finally, if Shinohara were modified as suggested by the Examiner, so that Shinohara's input buffer module dropped packets in response to the backpressure signal (as opposed to ceasing to send packets to the output buffer module, as performed by the unmodified input buffer module), it is likely that the output buffer module in Shinohara would still overflow, which is the condition Shinohara explicitly seeks to avoid. In particular, if modified as suggested, the input buffer module could still send packets to the output buffer module, after beginning to drop packets. If a proposed modification would render the prior art feature inoperable for its intended purpose, then there is no suggestion or motivation to make the proposed modification. *In re Gordon*, 733 F.2d 900 (Fed. Cir. 1984).

Claims 2-14 are patentable over the cited art for at least the reasons provided above with respect to claim 1. Claims 15-38 are patentable for similar reasons to those provided above with respect to claim 1.

Additionally, as noted in the previous response, the cited art fails to teach or suggest an ingress receiver that discontinues inbound packet drop after a predetermined time, as recited in

claim 7. The Examiner states that Shinohara teaches the features of this claim, but does not cite any portion of Shinohara. Instead, the Examiner states that "it is inherently to know that the ingress which has to drop a packet in a time limit or predetermined time so the communication system returning to normal service." FOA, page 3.

The rejection clearly fails to describe how the cited art teaches the features of claim 7. Furthermore, even if the cited art does inherently teach dropping a packet within a time limit or predetermined time, such a teaching is irrelevant to whether the cited art teaches an ingress receiver that "discontinues inbound packet drop after a predetermined time." Dropping a packet within a time limit relates to the situation in which one particular packet is dropped relative to some stimuli, while discontinuing inbound packet drop relates to the situation in which an ingress receiver stops dropping inbound packets relative to when the ingress receiver begins dropping inbound packets. These two concepts are clearly not equivalent. Accordingly, claim 7 is clearly patentable over the cited art. Claims 22, 30, and 38 are additionally patentable over the cited art for similar reasons.

CONCLUSION

In view of the amendments and remarks set forth herein, the application is believed to be in condition for allowance and a notice to that effect is solicited. Nonetheless, should any issues remain that might be subject to resolution through a telephonic interview, the Examiner is invited to telephone the undersigned at 512-439-5087.

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to: Mail Stop RCE, COMMISSIONER FOR PATENTS, P. O. Box 1450, Alexandria, VA 22313-1450, on October 17, 2005.

Brenna A Brock 10-17-2005

Attorney for Applicant(s) Date of Signature

Respectfully submitted,

Brenna A Brock

Brenna A. Brock
Attorney for Applicants
Reg. No. 48,509
(512) 439-5087 [Phone]
(512) 439-5099 [Fax]